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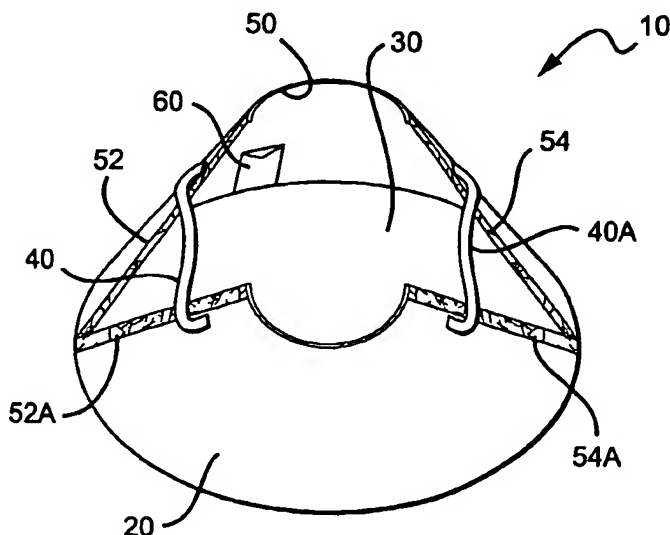
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(54) Title: BOAT PROPELLER COVER



(57) Abstract: A boat propeller cover (10) has a housing (20) that surrounds the propeller while affixed to the propeller shaft, and provides a protective case for the propeller when it is removed from the shaft.

WO 03/049993 A1

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BOAT PROPELLER COVER

Field of The Invention

The field of the invention is boats.

Background of The Invention

5 Substantially all boats have propellers. When a boat is not in use, the propellers can be either left on the boat or removed and stored separately. In both these instances, the propellers need to be protected for at least two reasons. First, the propeller blades are sharp and may cut someone. Second, the propeller blades may become damaged if they are not protected when not in use.

10 Additionally, propellers are often carried from place to place. One reason may be to have several different types and sizes of propellers to accommodate changing boating conditions. Because propellers that are being carried can be damaged, and the blades can cut people, a carrying case for boat propellers is needed that also provides a protection function.

Three general types of boat propeller covers are known. The first type includes
15 individual covers that fit over each of the blades of a propeller. However, this type of cover does not eliminate the dangers associated with propellers because the individual blade covers can easily be lost or misplaced, defeating the whole purpose of the cover. Furthermore, the covered propeller does not make it much easier to carry because this type of cover does not immobilize the moving parts of the propeller.

20 The second type of cover is a simple box-type cover that encloses the propeller. For example, US Patent 5,246,345 to Adams, Jr. (Sep. 1993) teaches a cover that is made of a non-flexible material. Although this type of cover protects against the dangers associated with exposed sharp blades, carrying the propeller is difficult because the non-flexible material makes this type of cover is difficult to grasp and hold. This is especially true when
25 the cover encloses a large propeller. Also, the shape of this type of cover may be unwieldy.

The third type of propeller cover is a complex box-type cover with additional protruding pockets. US Patent 6,152,064 to Morton (Nov. 2000), for example, teaches a propeller cover that includes a flexible sleeve into which buoyant material is placed. The

pockets may have various advantages, but they make the even more difficult and unwieldy to carry.

Thus, there is still a need for a propeller cover that (1) protects the blades both when the propeller is connected to the drive shaft and when the propeller is being carried; and (2) is
5 relatively easy to carry.

Summary of the Invention

The present invention is directed to a boat propeller cover having a housing that surrounds the propeller while it is affixed to the shaft, functions as a protective carrying case for the propeller when it is detached from the shaft, and has carrying handles that ease
10 transport of the propeller.

With respect to the housing, the size and dimension can vary according to the size and dimension of the propeller. It is preferred, however, that the housing snugly encloses the propeller. The housing is preferably made of a closed cell fabric, but can be made of any suitable material. A pocket may advantageously be included inside the housing.

15 Preferred housings have an opening that is configurable between a open and closed conformation. When the opening is in the open conformation, the opening is large enough to allow the cover to be placed around the propeller. When the opening is in the closed conformation, the opening is large enough to fit snugly over the drive shaft. Velcro® or other closure mechanisms can be used to adjust the size of the opening.

20 The handles are preferably long enough to carry easily and comfortably, which in most cases, would be greater than 6 inches. The handles are made of a flexible fabric or any other suitable material that is easily grasped and comfortable to carry. It is advantageous that the handles are positioned on either side of the opening so that the propeller cover is balanced.

25 Various objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of preferred embodiments of the invention, along with the accompanying drawings in which like numerals represent like components.

Brief Description of The Drawings

Figure 1 is a perspective view of a propeller cover, in which the opening is in a open conformation.

Figure 2 is a perspective view of the propeller cover of **Figure 1**, in which the opening is in a closed conformation.

Figure 3 is a perspective view of the propeller cover of **Figure 1** installed on a boat propeller.

Detailed Description

Figure 1 generally depicts a propeller cover 10 having a housing 20, a space 30 sized and dimensioned to receive a propeller, and handles 40 and 40A. The housing 20 has an opening 50 that is configurable between a open and closed conformation so that in the open conformation the cover fits around a propeller, and in the closed conformation, the opening fits snugly around a drive shaft. Each of these is discussed in detail below.

Housing 20 may be made of any suitable material that is durable, water-resistant, strong, rust proof, or light-weight. For example, the housing 20 can advantageously comprise closed cell fabric, but may be made of any other suitable material including flexible material, flexible plastic, heavy plastic, wood, or aluminum.

Housing 20 is preferably a truncated cone because it easily receives and snugly encloses a propeller and that can easily be carried, but all practical shapes are contemplated. The size and dimensions of the housing 20 can vary according to the size and dimension of the propeller. Different covers 10 will comprise different shapes, sizes, and dimensions corresponding to various propeller shapes and sizes. Structurally, the housing 20 may comprise different portions that have been coupled together or a single portion.

Since the housing 20 defines the space 30, the size, shape, and dimension of the space 30 will vary according to the housing 20. In a preferred embodiment, the space 30 is shaped as a truncated cone that snugly encloses a propeller. The space 30 is typically between 1 square foot and 3 square feet to accommodate small and fairly large propellers.

The handles 40 and 40A can be made of any material so long as it is water resistant, comfortable to hold, and easy to grasp, including flexible fabric, flexible plastic, cord, and leather. It is preferred that the handles 40 and 40A are a length greater than 6 inches to ease carrying. Furthermore, the handles 40 and 40A can be identical to one another, or can be
5 different sizes to accommodate different ways of carrying the cover 10. It is also contemplated that the handles 40 and 40A are coupled to the housing 20 in any number of places and positions to facilitate carrying and balancing the cover. In especially preferred embodiments, the handles 40 and 40A are made of gore-tex®, identical to one another, 6-8 inches in length, positioned on opposite sides of the opening 50 so that the cover is balanced,
10 and each handle 40 and 40A is coupled in two positions, 4 inches apart.

The opening 50 is configurable to at least two conformations. In the open conformation, the opening 50 is large enough to slip over a boat propeller. A typical boat propeller is larger than 8 inches in diameter. The opening 50 can comprise any shape or size depending on the shape and size of the housing 20. There can be one or several openings 50
15 positioned in any manner, including equidistant from each other or skewed to create a flap, so long as the positions facilitate placing the propeller in the space 30. When the housing 20 is a truncated cone, it is preferable that two openings 50 reach the base of the cone and are located equidistant from each other.

The closure mechanisms 52, 52A, 54, and 54A are coupled to the housing 20 in such
20 a manner as to extend the opening 50. To function properly, the closure mechanisms 52, 52A, 54, and 54A are coupled to the housing 20 next to the opening 50. The closure mechanisms can be placed in various positions so long as they prevent the propeller in space 30 from falling out. Furthermore, the closure mechanisms 52, 52A, 54, and 54A are preferably Velcro®, but may be any type including clasping mechanisms, any type of
25 interlocking fasteners, hooks, buttons, zippers, or snaps. In a preferred embodiment, the closure mechanisms 52 and 54 are coupled to the housing 20 opposite closure mechanisms 52A and 54A so that closure mechanisms 52 and 52A mate and 54 and 54A mate.

The opening 50 in the open conformation is formed when the closure mechanisms 52, 52A, 54, and 54A are not mating with each other.

- The pocket 60 may be placed either on the interior or exterior portion of the housing 20. The pocket 60 may be any size but is preferred to be large enough to conveniently carry any screws, nuts, and small tools that are required to affix a propeller to a boat. The pocket 60 can also contain a flap or other closing mechanism to keep the contents from falling out.
- 5 For manufacturing convenience, the pocket 60 can comprise the same material as the housing 20, but may be any suitable material.

Figure 2 depicts a propeller cover 10 having a housing 20, a space sized and dimensioned to receive a propeller 30, handles 40 and 40A, and an opening 50 in the closed conformation.

- 10 In a preferred embodiment, the closure mechanism 52 and 54 are interlocking hooks and the closure mechanism 52A and 54A are interlocking loops such that the closure mechanism 52 and 52A mate with each other, and 54 and 54A mate with each other.

- The opening 50 in the closed conformation is formed when closure mechanism 52 and 52A mate with each other, and 54 and 54A mate with each other, thus closing a portion of the opening 50. The opening 50 in the closed conformation is any suitable size, but is preferably sized to fit snugly around a propeller shaft. As used herein, the term "closed conformation" does not mean completely closed or closed off.
- 15

Figure 3 depicts a propeller cover 10 positioned over a propeller 70, and a securing mechanism 80. The propeller 70 comprises a shaft portion 72 and a propeller portion 74.

- 20 The securing mechanism 80 is preferably a bungee cord, but may be substituted with any suitable material including rope, leather, wire, plastic, fabric, and rubber so long as it is strong, durable, and light-weight. The securing mechanism 80 functions to secure the propeller cover 10 in place and keep the handles 40, 40A from getting tangled.

- The propeller cover 10 encloses the propeller portion 74, and the opening 50 in the closed conformation fits snugly around the shaft portion 72. With the propeller cover 10 properly enclosing the propeller portion 72, the first end of the securing mechanism 80 is attached to handle 40 and the second end of the securing mechanism 80 is attached to handle 40A. The securing mechanism 80 is stretched over the motor 90 to secure the propeller cover 10 in place.
- 25

Thus, specific embodiments and applications of compositions for a boat propeller cover have been disclosed. It should be apparent, however, to those skilled in the art that many more modifications besides those already described are possible without departing from the inventive concepts herein. The inventive subject matter, therefore, is not to be
5 restricted except in the spirit of the appended claims. Moreover, in interpreting both the specification and the claims, all terms should be interpreted in the broadest possible manner consistent with the context. In particular, the terms "comprises" and "comprising" should be interpreted as referring to elements, components, or steps in a non-exclusive manner, indicating that the referenced elements, components, or steps may be present, or utilized, or
10 combined with other elements, components, or steps that are not expressly referenced.

CLAIMS

What is claimed is:

1. A cover for a boat propeller having a shaft portion and a propeller portion,
comprising:
5 a housing defining a space that receives the propeller;
an opening configurable between a closed conformation through which the shaft
portion can extend, and a open conformation through which the propeller
portion can be inserted; and
a first handle coupled to the housing.
- 10 2. The cover of claim 1, wherein the housing comprises a closed cell fabric.
3. The cover of claim 1, wherein the housing comprises a tapered portion.
4. The cover of claim 1, wherein the housing comprises an interlocking loop
fastener.
- 15 5. The cover of claim 1, wherein the housing comprises two interlocking loop
fastener.
6. The cover of claim 5, wherein the two interlocking loop fasteners are on opposite
sides of the opening.
7. The cover of claim 1, wherein the handle comprises a flexible fabric.
8. The cover of claim 1, wherein the handle comprises a length greater than 6 inches.
- 20 9. The cover of claim 1, wherein the handle is coupled to the housing in two places.
10. The cover of claim 1, further comprising a second handle coupled to the housing.
11. The cover of claim 10, wherein each of the handles is coupled to the housing in
two places.
- 25 12. The cover of claim 1, wherein a pocket is disposed inside the space.

AMENDED CLAIMS

**Received by the International Bureau on 23 August 2002 (23.08.2002) :
original claims 1-12 replaced by amended claims 1-12 (2 pages)**

1. A cover for a boat propeller having a shaft portion and a propeller portion, comprising:
a housing defining a space that receives the propeller;
an opening configurable between a closed conformation through which the shaft portion can extend, and an open conformation through which the propeller portion can be inserted; and
a first carrying handle coupled to the housing.
2. The cover of claim 1, wherein the housing comprises a closed cell fabric.
3. The cover of claim 1, wherein the housing comprises a tapered portion.
4. The cover of claim 1, wherein the housing comprises an interlocking loop fastener.
5. The cover of claim 1, wherein the housing comprises two interlocking loop fastener.
6. The cover of claim 5, wherein the two interlocking loop fasteners are on opposite sides of the opening.
7. The cover of claim 1, wherein the carrying handle comprises a flexible fabric.
8. The cover of claim 1, wherein the carrying handle comprises a length greater than 6 inches.
9. The cover of claim 1, wherein the carrying handle is coupled to the housing in two places.
10. The cover of claim 1, further comprising a second carrying handle coupled to the housing.
11. The cover of claim 10, wherein each of the carrying handles is coupled to the housing in two places.

12. The cover of claim 1, wherein a pocket is disposed inside the space.

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FIG. 1

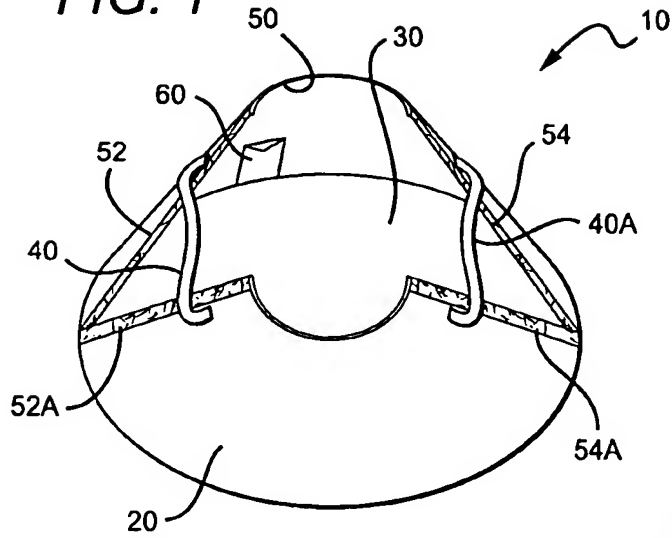


FIG. 2

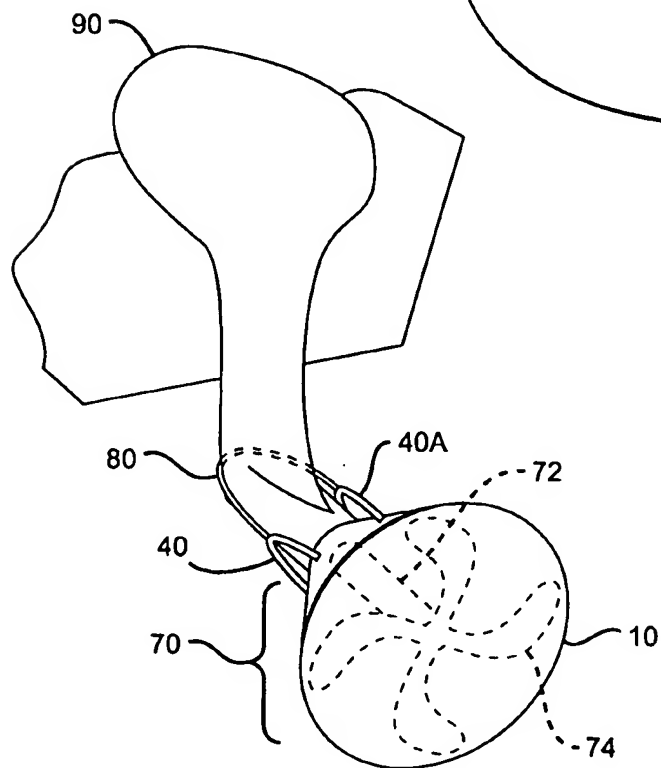
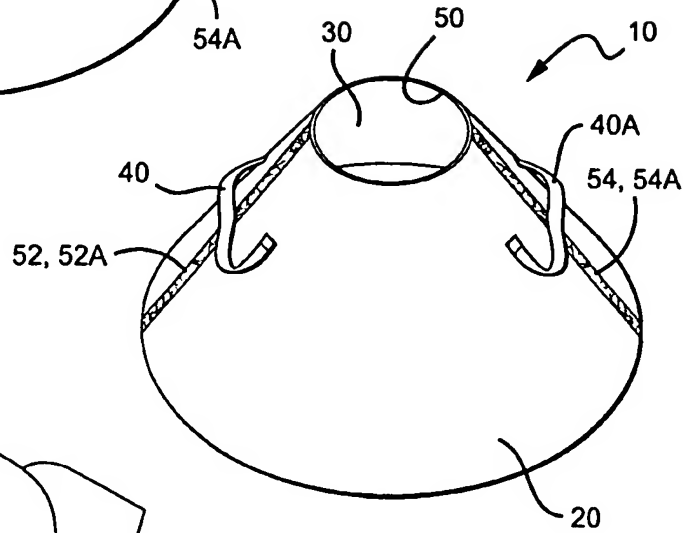


FIG. 3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/47015

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B63B 17/00

US CL : 114/361

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 114/361,343,219; 440/49

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,664,975 A (CARLISLE) 09 September 1997, see entire document.	1,3,4,5
X	US 5,660,136 A (PIGNATELLI et al.) 26 August 1997, see entire document.	1-3,9-12



Further documents are listed in the continuation of Box C.



See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

15 MARCH 2002

Date of mailing of the international search report

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